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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,436	07/16/2003	Oliver Meyer	237707US0	6953

22850 7590 01/08/2007
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

LAO, MARIALOUISA

ART UNIT	PAPER NUMBER
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1621

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/08/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/619,436

Applicant(s)

MEYER ET AL.

Examiner

MLouisa Lao

Art Unit

1621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>6/17/2004</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Acknowledgement of Election/Restriction

1. Applicants' election of species Ic (claims 1-4 and 8) with traverse of restrictions in the reply filed on November 11, 2006 is acknowledged.

The applicants' arguments have been taken into advisement and are found persuasive. The restrictions are withdrawn and the claims 1-20 are reviewed on the merits.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
2. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naohiro et al. (JP56-025185, JP '185), and further in view of Buzzard et al. (WO02/22593, WO '593).

JP '185 shows that the use of acids in the preparation of piperidone ketals, in the presence of solvents, had been disclosed at the time of the invention. JP '185 discloses the reaction of a piperidone with a polyhydric alcohol in a hydrocarbon solvent at 60- 200°C with the distillation of water to attain a 4-piperidone spiroketal compound (see page 1 under Constitution).

The artisan skilled in the art would be motivated to use hydrogen chloride acid catalysts since the hydrogen chloride catalysts are equivalent to the acid catalysts used by the method of JP '185; since the JP '185 method similarly uses piperidone compounds reacted with hydroxyl derivatives to produce the similar products of ketals as in the present invention.

JP '185 is silent on the use of hydrogen chloride acid catalysts in the gaseous form. The WO '393 art is relied upon to emphasize the use of acid catalysts in the gaseous form, in particular hydrochloric acid (see page 2 lines 12-13 and page 3 lines 20-21) for the gaseous catalysis of the conversion of pentose or pentosan to furfural (see page 1 lines 2-3).

It would be obvious to use hydrogen chloride acid catalysts, regardless of physical form, in the method of preparing ketals in JP '185 since the usage of these alternate forms of acid catalysts have been shown to work as disclosed in WO '393, and would be within the purview of the artisan skilled in the art at the time of the invention.

The use of the alternate form of acid catalysts would render the ketal reaction to proceed with a reasonable degree of success, as desired in the instant invention.

3. The examiner takes the position that the neutralization steps recited in dependent claims 17-18 are not novel, since implementing a neutralizing step in an acidic laden organic reaction is within the purview of a skilled artisan within the norm of organic synthesis practice.

4. Similarly, the recitations of ratios of reactants with the catalyst are not novel; since these are within the skilled artisan's practice to optimize conditions as routine practices, requiring no inordinate degree of experimentation.

It is *prima facie* obvious to combine the teachings of the prior art, which renders the instant claims unpatentable.

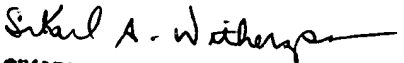
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5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MLouisa Lao whose telephone number is 571-272-9930. The examiner can normally be reached on Mondays to Fridays from 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman Page, can be reached on 571-272-0602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mll 12062006


KARL A. WITHERSPOON
PRIMARY EXAMINER